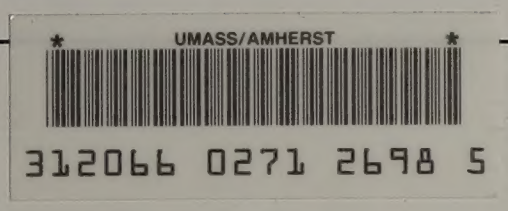
MASS. EA24.202: P96



Toxics Use Reduction

BUREAU OF WASTE PREVENTION
DEPARTMENT OF ENVIRONMENTAL PROTECTION
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
COMMONWEALTH OF MASSACHUSTS

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COLLECTION

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PUBLIC HEARING DRAFT

310 CMR 50.30

AMENDMENTS TO THE REPORTING FORMS ESTABLISHED PURSUANT TO THE TOXICS USE REDUCTION ACT

MARCH 1995

Trudy Coxe
Secretary
EOEA

Thomas Powers
Acting Commissioner
DEP

Patricia Stanton
Asst. Commissioner
BWP

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While supplies last, a copy of this
public hearing draft can be obtained
by calling or writing:

TURA Implementation Team
Bureau of Waste Prevention
Department of Environmental Protection
One Winter Street, 7th Floor
Boston, MA 02108

(617) 292-5982

LEGAL NOTICE

Notice is hereby given that the Department of Environmental Protection, under its authority delegated by M.G.L. Chapter 21I, Sections 3(F) and 10(A) and in conformance with M.G.L. c 30A, will hold public hearing on proposed amendments to 310 CMR 50.30, the regulations governing reporting under the Toxics Use Reduction Act (TURA). The proposed amendment to 310 CMR 50.30 would revise the Form S Cover Sheet to require that products and production processes be described using codes from a proposed list of codes. The amendment is intended to provide information to be used in the development of user segments as required by Section 3(G) of TURA.

NOTE: The Department originally scheduled hearings on these amendments for Friday, March 3, 1995. Those hearings have been rescheduled and a new public comment period set as specified below.

PUBLIC HEARINGS WILL BE HELD AS FOLLOWS:

Thursday, March 30, 1995

9 am, DEP, One Winter Street, Boston
3rd Floor Conference Room

1 pm, DEP, 75 Grove Street, Worcester
Assabet Conference Room

Oral or written testimony will be accepted at the hearing. Written testimony may be submitted to: DEP; Walter Hope, 1 Winter Street-7th floor; Boston, MA 02108. Copies of the proposed regulations may be obtained by calling 617-292-5982 or writing to TURA Reporting & Planning Program, Bureau of Waste Prevention, Department of Environmental Protection, One Winter Street, Boston, Massachusetts 02108. The Department will accept written comments from March 8 until April 6, and will revise or amend the proposed regulation as it deems necessary and appropriate.

By order of the Department.

Thomas Powers, Acting Commissioner
Department of Environmental Protection

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DISCUSSION: PROPOSED REVISIONS TO TURA REPORTING FORMS (To obtain information as needed for DEP to classify production units into user segments)

The Department of Environmental Protection (DEP) is proposing -- for public review and comment -- certain revisions in the reporting forms established by the Toxics Use Reduction Act (TURA).

The revisions will provide generic information to begin the development of regulations necessary to comply with the mandate of Section 3(G) of TURA. That section requires that DEP "promulgate regulations for classifications of production units" into user segments according to similarities in products and processes. As with other TURA regulations, development of the user segment regulations will entail a process of guidance from interested parties and public review.

The reporting-form revisions were developed with input and guidance from an advisory group comprised of Toxics Use Reduction Planners (TURPs) and representatives from industry, environmental organizations, the Office of Technical Assistance (OTA), and the Toxics Use Reduction Institute (TURI). The advisory group was appointed by the TURA Advisory Board.

The proposed changes to the forms involve the addition of alpha-numeric codes for consistent reporting of products and processes. As described more fully below, the coding system is an effort to maintain the traditional flexibility firms have been given in grouping products and processes into production units, while providing information that will be needed to develop user segment regulations. NO CHANGE IS PROPOSED IN HOW FIRMS DEFINE THEIR PRODUCTION UNITS.

For the average firm, the time required to fill in the new information should be minimal. The codes are generic; and therefore, each firm should only need to use a few codes for their products and processes.

This document summarizes the revisions to the TURA reporting forms. It begins with a description of current reporting requirements. It then identifies limitations in the current system and summarizes how the proposed revisions would address those issues. From there, the document describes how the proposed new data elements will be used and highlights specific issues for which public comment is being sought.

Background - Current Reporting Requirements

Under TURA, the production unit (defined as the process(es) used to produce a product) is the basic unit for reporting and planning. The regulations give firms flexibility concerning how they wish to link processes and products to designate their production units. The rationale is that firms are better suited to make such decisions than are the regulators.

When it comes to TURA reporting, firms list their production units in the **Form S Cover Sheet** -- describing the processes in their own words and identifying the products using one or more four-digit SIC code(s). Last year a total of some 225 four-digit SIC codes were reported, as were some 800 process steps (or unit operations). This information is entered into the TURA computer system where data concerning:

* Chemical use, byproduct amounts, byproduct reduction indices, TUR techniques, etc, can be sorted and arrayed by SIC code;

* Production processes can be displayed but no sorting of additional information is possible because production information is entered into a text field.

Limits of Current Reporting System

Although the current system provides very useful data, the system does have certain limitations associated with (1) the flexibility firms have in designating production units, (2) the limits of the SIC code system as a descriptor of products and (3) the current method of describing processes.

Issues Associated with Flexible Designation of Production Units -- TURA regulations give firms flexibility in how they group products and processes into production units. Consequently, two firms making similar products using the same three production processes may have very different production units. One firm, for example, might group the products and all three processes into one production unit. The other could create three separate production units based on each of the three processes. Consistent information is difficult to obtain given that the number of product/process combinations is large.

Limits of the SIC Code System as a Descriptor of Products -- The SIC codes system was designed to capture economic information, the SIC code is not necessarily geared to identify the kinds of commonalities among products that might be relevant to TUR efforts. For example, SIC code group 30 contains the codes for "Rubber and Miscellaneous Plastics Products." Sporting goods made from rubber are not classified as group 30 rubber goods, however, they are instead classified under SIC code 3949 ("Sporting and Athletic Goods, NEC").

Similarly there is an SIC code for electroplaters (3471). That code applies to fabricated metal products. Firms that use electroplating as part of a number of processes used to make other kinds of product do not uniformly think of themselves as "electroplaters." Consequently, certain commonalities that may exist across industries are not always reported.

Current Method of Describing Processes -- There are actually three issues associated with the current method of describing processes. (1) The fact that production process information is reported using each firm's terminology leads to some inconsistency in reporting as firms use different terms to describe identical or very similar processes. (2) Since process information is entered into a text field, sorting information by process is not technically feasible, at least, as

the TURA data base is currently structured. (3) There is no method for identifying which production process is associated with which chemical(s).

Proposed Revisions to the Reporting Forms

Standard Codes for Products and Processes -- To address the issues outlined above, DEP is proposing two lists of alpha-numeric codes, one for products, another for processes. Both lists were developed with guidance from an advisory group which examined the 225± 4-digit SIC codes reported for products and the 800± production process steps.

The products and processes were then grouped into broad categories based on such consideration as similarities in: (1) products or processes, (2) chemical usage, (3) byproduct production, and (4) opportunities for TUR. Alpha-numeric codes have been assigned to each generic category.

DEP developed proposed revisions to the **Form S Cover Sheet** to add information blocks where firms would report on their production units using the standard product and process codes. (Note that TURA requires that the Forms S forms must be issued (and amended) through regulations. While the product/process codes could be placed in the reporting instructions, the advisory group recommended that these codes be put in regulations as well.)[1]

With the revised **Form S Cover Sheet**, it is expected that most firms will be able to describe their products and processes using a very few codes. For products or processes that might not easily be classified under one of the codes, the list includes a "Most Like" category, where firms can describe products or processes by reference to an existing category. (Depending upon the number and types of "Most Like" items reported, DEP will evaluate the need to add additional codes in the future.

NOTE: The generic coding system does not call for changes in firms' already-designated production units. By contrast, the system is a way of obtaining consistent information without limiting the flexibility firms currently have in delineating production units.

---

[1] There are two reasons for placing the generic codes in the regulations. (1) Any changes to the list of codes would have to follow the formal regulatory process. Consequently, the list is more likely to remain stable over time. (2) If the codes are a part of the regulation, DEP would be on stronger legal footing if, in the unlikely event, the agency needed to pursue compliance efforts for misuse of codes.

On the other hand, it is possible that with more experience with the codes, certain additional codes might be suggested. Placing the codes in the regulations limits the flexibility in making such changes.

Reporting on Chemicals by Production Processes -- If a firm reports more than one process in a production unit and it reports on more than one chemical, no mechanism currently exists to identify which process step is associated with which chemical(s). Based on guidance from the advisory group, DEP is proposing, for public review and comment, revisions to the **Form S Cover Sheet** where information linking specific process steps to chemicals could be reported. Mindful of the potential paperwork impacts, particularly on firms with many chemicals and processes, the Department has attempted to fashion the proposed change to minimize additional efforts.

Specifically, the revised form asks whether all the chemicals reported for the year are associated with all production processes, and if not, the form provides spaces for firms to list which chemical(s) are associated with which production process(es).

Minor Revisions -- In addition to the changes just described, DEP is proposing a minor change to delete the block at the top of the **Form S** documents where the facility identification number is reported. The purpose of requesting that number was to allow the reports to be reassembled if the pages become separated. Since the reporting of the facility identification number has been inconsistent, DEP is proposing to ask instead for the facility town. Also, at the top of the **Form S** itself, a line has been added for the name of the chemical for the same reason.

How New Data Elements Might Be Used

The proposed product/process codes and reporting on chemicals by process are expected to be used to develop the information-base necessary for DEP to classify production units into user segments. The proposed reporting changes are, however, only a first step. As the advisory group explicitly recognized, the fact that a group of firms share a common product code and common process code may or may not be the only appropriate factor to consider for placement into a user segment.

Through a public process, DEP plans to conduct further research to determine user segments. Part of this effort will involve research into the data base to identify what similarities and differences exist for the products and processes as coded. From there, developing the user segment regulations will involve discussions with interested parties, including the advisory group. Ultimately, these regulations will be submitted for general public review and comment.

Just as the reporting changes are a step toward classifying user segments, the user segments once developed will form the universe from which the Administrative Council may chose to designate "priority user segments." Under TURA, there are specific statutory criteria for determining priority user segments. Once so designated, the priority user segment can be the focus of technical assistance from OTA and research efforts by TURI. In certain narrowly-drawn circumstances, DEP could request authority from the Administrative Council to set performance standards if firms in a priority user segment are falling behind national or state norms for TUR progress. Any such standards would have to go through the standard regulatory process.

NOTE: Apart from issues associated with user segments, the new coding system would serve as an important tool to refine technical assistance and research by the TURA agencies. The codes look across industries in terms of common products and processes.

One major advantage to doing so, is that such a view can identify and speed the technology transfer across industries. For example, the proposed revision would have all firms with coating operations report using the same code. If some new TUR technique is adopted by a firm that coats leather, the applicability of that technique to paper coaters or fabric coaters can be further evaluated.

Request for Public Comment on Specific Issues

Although DEP welcomes advice on all aspects of the proposed revisions, comments are specifically invited on the following questions:

1. Are there products/processes that the codes fail to cover?

2. Should some products/processes not be grouped together as suggested by the codes?

3. Does the proposed reporting system achieve the goal of efficiently gathering information to enable DEP to begin the task of developing user segment regulations?

4. Should the product/process codes be placed in the regulations, as opposed being listed in the reporting instruction? (See footnote 3.)

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Massachusetts Department of Environmental Protection

TURA REPORT - COVER SHEET

Toxics Use Reduction Act - Form S Cover Sheet

Section 1: General Information

1.1 ATTACH MAILING LABEL with facility name address & DEP Facility Identification Number

ATTACH CORRECTED MAILING LABEL or enter facility, name & address

1.2 Are you making a trade secret claim for any of the information submitted in this COVER SHEET and/or Form S(s)? ____YES ____NO

1.3 If YES, attach a statement substantiating the claim. Is this copy: ____Sanitized ____Unsanitized

1.4 This report is being filed for reporting year: 19_____

Section 2: Certification Statement

2.0 This CERTIFICATION STATEMENT should be signed after all the forms have been completed.

I hereby certify that I have reviewed this and all attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in these documents are accurate based on measurements and/or reasonable estimates using data available to the preparers of these documents. I am aware that there are significant penalties for willful or intentional submission of false or incomplete information.

_____ _____

Authorized Signature Print Name

_____ _____

Position/Title Date

Section 3: Chemicals Previously Reported That Are Not Reportable This Year

3.0 OPTIONAL QUESTION. In this section, you may provide information on any chemical reported last year that is not subject to reporting this year. If you substituted a non-listed chemical for a TURA chemical, you may identify the substitution, as well.

The codes to explain why the chemical is not reportable are: [1] Chemical Below Threshold But > 0 [2] No Chemical Usage in Reporting Year [3] Chemical Substitution [4] Chemical Eliminated (No Substitution) [5] Decline in Business [6] Other (Explain below in the additional comments section). Enter all the codes that apply.

3.1 _____ _____

CAS # of Chemical Not Reportable (if applicable) Chemical Name

Explanation of Why the Chemical Is Not Reportable. (Enter Code): |___| |___| |___| |___|

_____ _____

CAS # of Chemical Substituted for TURA Chemical Chemical Name

3.2 _____ _____

CAS # of Chemical Not Reportable (if applicable) Chemical Name

Explanation of Why the Chemical Is Not Reportable. (Enter Code): |___| |___| |___| |___|

_____ _____

CAS # of Chemical Substituted for TURA Chemical Chemical Name

Additional Comments:_____

FACILITY NAME _____ TOWN _____ Page ____ of ____

FORM S COVER SHEET (continued)

Section 4: *Facility-Wide Listing of Production Units*

A PRODUCTION UNIT is best thought of as the combination of the process (or activities) used to produce a product or service and the product or service. In this block, please identify the PRODUCTION UNITS at the facility, then use the production unit number to report on chemical usage in the attached Form S. If there is a substantial change in a PRODUCTION UNIT from one reporting year to the next, the PRODUCTION UNIT must be given a new, unique number.

Production Unit #: _____

This Production Unit (Process/Product Combination) is: ____ The Same As Reported Last Year ____ New

Describe the Process: _____

_____

_____

Describe the Product: _____

_____

Enter the four-digit SIC Code(s) that best describe(s) the product:

|___|___|___|___| |___|___|___|___| |___|___|___|___| |___|___|___|___|

Enter the TUR Product Code(s) that best describe(s) the product:

|___|___|___| |___|___|___| |___|___|___| |___|___|___| |___|___|___|

Describe the Unit of Product: _____
(Please specify if the Unit of Product has been changed since the previous reporting year.)

PRODUCTION PROCESS INFORMATION FOR THIS PRODUCTION UNIT

Enter the TUR Production Process Code for each step in the production process that involves a TUR-regulated chemical as an input, output or throughput. (Please see the **Guidance Document: Using the TUR Production Process Codes.**)

1. |___|___|___| 2. |___|___|___| 3. |___|___|___| 4. |___|___|___|

5. |___|___|___| 6. |___|___|___| 7. |___|___|___| 8. |___|___|___|

Are all the chemicals reported associated with all the production processes identified above? ____ YES ____ NO

If NO, are some of the chemicals reported associated with all the production processes? ____ YES ____ No

If YES, list the chemicals by name and CAS number:

_____

_____

_____

_____

List below any chemicals that are associated with some, but not all, of the production processes. Identify the processes by code.

Chemical(s)	Production Process
_____	|___|___|___| |___|___|___|
_____	|___|___|___| |___|___|___|

FACILITY NAME _____ TOWN _____ Page ____ of ____

FORM S COVER SHEET (Continuation Page, for use, if necessary)

Section 4: *Facility-Wide Listing of Production Units*

Production Unit #: _____

Chemical(s)	Production Process
_____	___ ___ ___ ___ ___ ___
_____	___ ___ ___ ___ ___ ___
_____	___ ___ ___ ___ ___ ___

APPENDIX A: PRODUCT CODES

PRODUCT GROUP	PRODUCT CODE
FOOD & FOOD RELATED	A-01: Food (Mfg)
	A-02: Food-Contact Packaging
	A-99: Most Like (Enter A Code From Above)
TEXTILE & RELATED PRODUCTS/SERVICES	B-01: Mfg of Dyes & Textile Chemistry
	B-02: Mfg of Textiles & Threads
	B-03: Textile Dyeing & Finishing
	B-04: Fabricated Textile Products
	B-05: Laundry/Dry Cleaning
	B-99: Most Like (Enter A Code From Above)
WOOD PRODUCTS	C-01: Wood Furniture & Other Wood Products
	C-02: Pressure-Treated Wood
	C-99: Most Like (Enter A Code From Above)
PAPER INDUSTRY	D-01: Pulp & Paper Mills
	D-02: Converted Paper & Paperboard Products
	D-03: Coated & Laminated Paper
	D-99: Most Like (Enter A Code From Above)
PRINTING & PUBLISHING	E-01: Mfg of Printing Inks & Chemistry
	E-02: Mfg of Printing Plates & Print Cartridges
	E-03: Printing
	E-99: Most Like (Enter A Code From Above)
CHEMICALS	F-01: Chemical Distributors (no manufacturing)
	F-02: Printing Inks & Chemistry
	F-03: Leather & Textile Dyes/Chemistry
	F-04: Photographic & Light Sensitive Chemicals

APPENDIX A: PRODUCT CODES

PRODUCT GROUP	PRODUCT CODE
CHEMICALS	F-05: Industrial Inorganic Chemicals
	F-06: Plastics Materials & Synthetic Rubber
	F-07: Drugs & Pharmaceuticals
	F-08: Soaps, Detergents & Cleaners
	F-09: Perfumes & Cosmetics
	F-10: Paints, Varnishes & Lacquers
	F-11: Industrial Organic Chemicals
	F-12: Pesticides & Agricultural Chemicals
	F-13: Adhesives & Sealants
	F-14: Petroleum Products & Greases
	F-99: Most Like (Enter A Code From Above)
RUBBER & PLASTICS	G-01: Rubber Mfg & Formulating
	G-02: Mfg of Plastics & Plastic Chemistry
	G-03: Compounding of Purchased Plastics Resins
	G-04: Products Made From Rubber
	G-05: Products Made From Plastics
	G-06: Pressure Sensitive Tapes
	G-99: Most Like (Enter A Code From Above)
LEATHER & RELATED PRODUCTS	H-01: Mfg of Leather Dyes & Chemicals
	H-02: Leather Tanning
	H-03: Leather Finishing
	H-04: Fabricated Leather Products
	H-99: Most Like (Enter A Code From Above)
GLASS, CERAMIC & GYPSUM PRODUCTS	I-01: Glass Products
	I-02: Gypsum & Ceramic Products
	I-03: Abrasive Products & Sand Molds
	I-99: Most Like (Enter A Code From Above)
METAL PRODUCTS	H-01: Metal Smelting, Refining & Recovery

APPENDIX A: PRODUCT CODES

PRODUCT GROUP	PRODUCT CODE
	H-02: Scrap Metal (no smelting, etc.)
	H-03: Wire & Wire Products
	H-04: Metal Articles
	H-05: Metal Articles (Military Goods)
	H-99: Most Like (Enter A Code From Above)
ELECTRONICS	J-01: Computer Storage Devices & Magnetic/Optical Recording Media
	J-02: Glass & Ceramic Electrical Devices & Components
	J-03: Semiconductors, Wafers, Semiconductor Subassemblies (Mfg)
	J-04: Printed Circuit Board (Mfg)
	J-05: Printed Circuit Board Assembly
	J-06: Non-Electrical Devices & Equipment
	J-99: Most Like (Enter A Code From Above)
PHOTOGRAPHIC EQUIPMENT & SUPPLIES	K-01: Photographic Equipment & Parts
	K-02: Sensitized Photographic Film, Paper, Cloth, Plates
	K-03: Photographic & Light-Reactive Chemicals
	K-99: Most Like (Enter A Code From Above)
TEMPERATURE CONTROL	L-01: Refrigeration
	L-02: Heat Transfer
	L-03: Calibration of Temperature Regulating Devices
	L-04: Deicing
	L-99: Most Like (Enter A Code From Above)
STEAM & POWER	M-01: Steam & Power Generation
	M-99: Most Like (Enter A Code From Above)
TREATED BOILER & PROCESS WATER	N-01: Treated Boiler Water
	N-02: Treated Process Water
	N-99: Most Like (Enter A Code From Above)

APPENDIX B: PRODUCTION PROCESS CODES

OPERATION	PROCESS GROUP
CLEANING	Parts Cleaning D-01: Solvent-Based D-02: Aqueous D-03: Mechanical
	Equipment Cleaning D-04: Solvent-Based D-05: Aqueous D-06: Mechanical
	D-07: Metal Surface Treatment
	D-99: Most Like (Enter A Code From Above)
SEPARATION / REFINING	E-01: Centrifuge/Filtration
	E-02: Distillation
	E-03: Drying
	E-04: Extraction
	E-05: Precipitation
	E-06: Refining/Purification
	E-07: Smelting
	E-99: Most Like (Enter A Code From Above)
PRODUCT MOLDING/ FORMING	F-01: Casting/Molding
	F-02: Extrusion/Drawing
	F-03: Forging
	F-04: Forming by Mechanical Means
	F-05: Sintering/Powder Metallurgy
	F-99: Most Like (Enter A Code From Above)
HEAT TREATING	G-01: Heat Treating (of metals)
	G-99: Most Like (Enter A Code From Above)

APPENDIX B: PRODUCTION PROCESS CODES

OPERATION	PROCESS GROUP
BLENDING/MIXING	H-01: Blending, Mixing, Compounding
	H-99: Most Like (Enter A Code From Above)
BONDING/JOINING	I-01: Joining through Application of Heat
	I-02: Joining through Chemical Means
	I-03: Joining through Mechanical Means
	I-04: Application of Adhesives
	I-05: Soldering
	I-06: Welding/Brazing
	I-99: Most Like (Enter A Code From Above)
CHEMICAL REACTION	J-01: Acetalization
	J-02: Bleaching
	J-03: Condensation
	J-04: Curing, Vulcanizing, Cross Linking
	J-05: Dehydrogenation
	J-06: Esterfication
	J-07: Oxidation/Reduction
	J-08: Ph Adjust
	J-09: Polymerization
	J-10: Substitution Reactions
	J-99: Most Like (Enter A Code From Above)
FILLING / PACKAGING	K-01: Filling/Packaging
	K-02: Repackaging

APPENDIX B: PRODUCTION PROCESS CODES

OPERATION	PROCESS GROUP
	K-99: Most Like (Enter A Code From Above)
TREATMENT OF PROCESS WATER	L-01: Deionization, Demineralization
	L-02: Biocides/Disinfection
	L-99: Most Like (Enter A Code From Above)
REFRIGERATION	M-01: Refrigeration
	M-02: Heat Exchange Unit
	M-99: Most Like (Enter A Code From Above)
POWER GENERATION	N-01: Production of Electricity, Steam, Facility Heat
	N-99: Most Like (Enter A Code From Above)

FACILITY NAME: _____ FACILITY TOWN: _____ Page ____ of ____

Massachusetts Department of Environmental Protection

TURA REPORT - FORM S

Toxics Use Reduction Act - Chemical Usage Facility-Wide & by Production Units

Section 1: Facility-Wide Usage of Listed Chemical

1.1 _____ _____

Chemical Abstract Service (CAS) Number (if applicable) Chemical Identification (from Form R)

1.2 Facility-Wide Usage of Chemical Identified in 1.1 above. Enter total amount (in POUNDS) for each applicable category.
NOTE: Byproduct (item 1.2d) generally means all wastes containing the listed chemical before the waste is treated or recycled. Read the instructions carefully, however, before completing this section.

1.2a Manufactured: _____

1.2b Processed: _____

1.2c Otherwise Used: _____

1.2d Generated as Byproduct: _____

1.2e Shipped in or as Product: _____

1.3 OPTIONAL QUESTION. When the amounts reported in 1.2a, 1.2b, and 1.2c are added together, the sum will -- in many cases -- equal the sum of 1.2d and 1.2e. In other words, the left and right columns will often form a "materials balance." If the two columns are not in approximate balance, you may use this block to explain why. Mark all the reasons that apply.

_____ Chemical was recycled on site.

_____ Chemical was held in inventory.

_____ Other (explain):

_____ Chemical was consumed or transformed.

_____ Chemical is a compound.

_____

_____

1.4 OPTIONAL QUESTION: Did anything non-routine occur at your facility during the reporting year which affected the data reported?

_____ YES _____ NO If YES, you may use this space to comment: _____

_____

Section 2: Chemicals Used in Waste Treatment Units

2.1 Is this chemical used to treat waste or control pollution? _____ YES _____ NO

If YES, enter the quantity of chemical code for the amount used to treat waste or control pollution: |___|

OPTIONAL -- You may enter the amount: _____

Section 3: TURA Report on Production Unit #: _____ (Enter # from the Form S Cover Sheet.)

3.1 Base Year: _____

3.2 Quantity of Chemical Code: |___|

3.3 Toxics Use Reduction Techniques Code: |___|___| |___|___| |___|___| |___|___| |___|___| |___|___| |___|___|

3.4 Byproduct Reduction Index: _____

3.5 Emissions Reduction Index: _____

If there has been a change from one reporting year to the current year in a (1) base year, and/or (2) estimating methods (that significantly alter previously reported data) for this PRODUCTION UNIT REPORT, describe the change:

_____

FACILITY NAME: _____ * FACILITY TOWN: _____ * CHEMICAL: _____

Page _____ of _____

TURA Report on Production Unit #: _____ (Enter # from the Form S Cover Sheet.)

3.1 Base Year: _____ 3.4 Byproduct Reduction Index: _____

3.2 Quantity of Chemical Code: |__| 3.5 Emissions Reduction Index: _____

3.3 Toxics Use Reduction Techniques Code: |__|__| |__|__| |__|__| |__|__| |__|__| |__|__| |__|__|

If there has been a change from one reporting year to the current year in a (1) base year, and/or (2) estimating methods (that significantly alter previously reported data) for this PRODUCTION UNIT REPORT, describe the change:

_____

TURA Report on Production Unit #: _____ (Enter # from the Form S Cover Sheet.)

3.1 Base Year: _____ 3.4 Byproduct Reduction Index: _____

3.2 Quantity of Chemical Code: |__| 3.5 Emissions Reduction Index: _____

3.3 Toxics Use Reduction Techniques Code: |__|__| |__|__| |__|__| |__|__| |__|__| ␣␣ ␣␣

If there has been a change from one reporting year to the current year in a (1) base year, and/or (2) estimating methods (that significantly alter previously reported data) for this PRODUCTION UNIT REPORT, describe the change:

_____

TURA Report on Production Unit #: _____ (Enter # from the Form S Cover Sheet.)

3.1 Base Year: _____ 3.4 Byproduct Reduction Index: _____

3.2 Quantity of Chemical Code: |__| 3.5 Emissions Reduction Index: _____

3.3 Toxics Use Reduction Techniques Code: |__|__| |__|__| |__|__| |__|__| |__|__| |__|__| |__|__|

If there has been a change from one reporting year to the current year in a (1) base year, and/or (2) estimating methods (that significantly alter previously reported data) for this PRODUCTION UNIT REPORT, describe the change:

_____

TURA Report on Production Unit #: _____ (Enter # from the Form S Cover Sheet.)

3.1 Base Year: _____ 3.4 Byproduct Reduction Index: _____

3.2 Quantity of Chemical Code: |__| 3.5 Emissions Reduction Index: _____

3.3 Toxics Use Reduction Techniques Code: |__|__| |__|__| |__|__| |__|__| |__|__| |__|__| |__|__|

If there has been a change from one reporting year to the current year in a (1) base year, and/or (2) estimating methods (that significantly alter previously reported data) for this PRODUCTION UNIT REPORT, describe the change:

_____

Toxics Use Reduction Techniques Matrix

In this matrix, toxic use reduction techniques mark the rows and production operations head the columns. Within the matrix, a two-digit code appears the intersection of each row and column.

If a technique as applied to a production operation accounted for an increase of five or more points in the byproduct reduction index between the base year and reporting year, enter the code for that matrix cell in BLOCK 3.4 of FORM S. Enter all the codes that apply.

You may enter a "miscellaneous" code if two or more techniques (not otherwise entered) together accounted for an increase of five or more points.

	Materials Handling/Storage	Processing Operations	Finished Goods Handling
INPUT SUBSTITUTION: Changing the raw materials of product to use non- or less toxic materials.	10	11	12
PRODUCT REFORMULATION: Reformulating or redesigning end-products to be non- or less toxic upon use, release, or disposal.	20	21	22
PRODUCTION UNIT REDESIGN OR MODIFICATION: Using production units of a different design than those used previously.	30	31	32
PRODUCTION UNIT MODERNIZATION: Upgrading or replacing production unit equipment or methods.	40	41	42
IMPROVED OPERATION & MAINTENANCE OF PRODUCTION UNIT EQUIPMENT & METHODS: Modifying existing equipment/ methods by such steps as improved housekeeping, system adjustments or process/product inspections.	50	51	52
RECYCLING, REUSE, OR EXTENDED USE OF TOXICS: Using equipment/methods that are integral to the production unit.	60	61	62
MANAGEMENT TECHNIQUE OF USING BYPRODUCT AS PRODUCT: Use of byproduct without further treatment when the byproduct would have otherwise been released, treated, or shipped off-site for recycling/reuse	70	71	72
MISCELLANEOUS	80	81	82